



04 DIVISION
MORTAR

PORTLAND LIME & SAND MASONRY MORTAR



Great Workability. Increased Productivity.

SPEC MIX® Portland Lime & Sand Mortar is a dry preblended mortar mix containing Portland cement, hydrated lime and dried masonry sand formulated for superior bond, water retention and board life. Available in Types M, S and N, each meets ASTM C 270, ASTM C 1714 and CSA A179 requirements. SPEC MIX Portland Lime & Sand is available in standard or custom colors. In addition to custom mix designs that are available for specific applications or properties, the standard Portland Lime & Sand Mortar is designed to be compatible with the characteristics of the specified masonry unit. It is acceptable for all types of masonry construction.

SPEC MIX Portland Lime & Sand is produced under strict manufacturing standards, and complete quality control measures are implemented with each batch. A digital printout displaying the proper proportions per batch may be kept as a permanent record. Submittals are available upon request for certification to applicable ASTM, ACI, and CSA standards.

TYPICAL MATERIALS

PORTLAND CEMENT
HYDRATED LIME
SAND
PIGMENT



TYPE M (PL-02)
TYPE S (PL-03)
TYPE N (PL-04)
COLOR (PL-05)

AVAILABLE
IN COLOR



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INSTALLATION/APPLICATION

Mortar type should correlate with the particular masonry unit to be used. The specifier should evaluate the interaction of the mortar type and masonry unit specified. That is, masonry units having a high initial rate of absorption will have greater compatibility with mortar that has high water retentivity. The material properties of mortar that influence the structural performance of masonry are compressive strength, bond strength and elasticity. Because the compressive strength of masonry mortar is generally less important than bond strength, workability and water retentivity, the latter properties should be given principal consideration in mortar selection. Select mortar based on the design requirements and with consideration of code and specification provisions affected by the mortar.

A sample of the proposed product will be provided by the manufacturer for architectural approval and testing, if required. Preparation of a panel with all materials and systems employed in the final project is imperative. Retain the mock-up or field sample through the completion of the project.

Allow mortar to cure a minimum of 7 days but no more than 28 days before cleaning. Consult manufacturer of the masonry units and cleaning chemicals for further instructions to ensure proper washing procedures.

Clean masonry only with a national proprietary cleaning agent (following the manufacturer's instructions) or potable water. SPEC MIX products must be kept dry, covered and protected from weather and other damage.

SIZES AND EQUIPMENT

SPEC MIX Portland Lime & Sand Mortar is available in 80 lb (36.2 kg) packages for easy hand loading or in 3,000 lb (1,360.7 kg) reusable bulk bags to be used with the various SPEC MIX silo systems. When using the silo system, once the bulk bags of mortar are delivered to the project site, the portable silo is loaded with a jobsite forklift and the product is dispensed into a mechanical batch mixer. (See silo operations manual.)

MIXING INSTRUCTIONS

WEAR IMPERVIOUS GLOVES, such as nitrile.

- Mixing is best accomplished by using a mechanical mixer to ensure optimal workability and performance.
- Use clean, potable water; add the amount of water consistent with optimum workability which provides adequate water to satisfy the initial rate of absorption of the masonry units.
- Mixing times are four to five minutes when using a mechanical batch mixer and should be

ASTM C 270 PROPERTY SPECIFICATIONS (laboratory prepared)

| Type | Average compressive strength at 28 days, minimum PSI | Water retention, minimum % | Air content, maximum % |
|------|--|----------------------------|------------------------|
| M | 2,500 | 75 | 12 |
| S | 1,800 | 75 | 12 |
| N | 750 | 75 | 14* |

* When structural reinforcement is incorporated in cement-lime mortar, the maximum air content shall be 12%

CSA A 179 PROPERTY SPECIFICATIONS (laboratory prepared)

| Type | Minimum compressive strength at 28 days, MPa | Water retention, minimum % | Air content, maximum % |
|------|--|----------------------------|------------------------|
| M | 17.5 | 70 | 18 |
| S | 12.5 | 70 | 18 |
| N | 5 | 70 | 18 |

ESTIMATED YIELDS

| | 80 lb (36.2 kg) bags | 3,000 lb (1,360.7 kg) bags |
|-------------------|----------------------|----------------------------|
| 4 in Block | 14 to 16 | 525 to 600 |
| 6 in Block | 11 to 13 | 410 to 485 |
| 8 in Block | 10 to 12 | 375 to 450 |
| 10 in Block | 10 to 12 | 375 to 450 |
| 12 in Block | 9 to 11 | 335 to 410 |
| Modular Brick | 37 to 39 | 1,385 to 1,460 |
| Queen Sized Brick | 31 to 33 | 1,160 to 1,235 |
| King Sized Brick | 25 to 27 | 935 to 1,010 |
| Utility Brick | 22 to 24 | 825 to 900 |



Note: The yields given above are approximate and depend on labor practices, site conditions and design of work. Yields include typical waste. Some areas such as FL, CA, OR, and WA experience higher yields due to construction practices. Please contact your local representative for more specific yield information in your area.

- held consistent from batch to batch.
- Maintain the same mixing procedures to maintain consistency throughout the project.
- Tool mortar joints when the surface is thumb-print hard. Keep tooling times consistent.
- Hand mix mortar only with written approval by the specifier who should outline procedures.
- Use mortar within 2.5 hours after initial mixing.
- Retemper mortar only when mixing water is lost due to evaporation.
- Whenever possible, do not retemper colored SPEC MIX masonry mortars by adding additional water; retempering may affect color consistency.

LIMITATIONS

SPEC MIX Portland Lime & Sand Mortar should be installed in accordance with the provisions of the local building code and applicable ASTM, ACI, and CSA standards. Good workmanship coupled with proper detailing and design assures durable, functional, watertight construction. Follow proper cold-weather and hot-weather masonry procedures at temperatures below 40 °F (4 °C) or above 100 °F (38 °C) respectively.

LIMITED WARRANTY

SPEC MIX, Inc. warrants this product to be of merchantable quality when used or applied in accordance with the instructions hereon. This product is not warranted as suitable for any purpose or use other than the general purpose for which it is intended. Liability under this warranty is LIMITED to the replacement of its product (as purchased) if found to be defective, or at the shipping company's option, to refund the purchase price. In the event of a claim under this warranty, notice must be given to SPEC MIX, Inc. in writing at: One Securities Centre, 3490 Piedmont Road, Suite 1300, Atlanta, GA 30305. THIS WARRANTY IS ISSUED AND ACCEPTED IN LIEU OF ALL OTHER EXPRESS WARRANTIES AND EXPRESSLY EXCLUDES LIABILITY FOR CONSEQUENTIAL DAMAGES.

TECHNICAL SUPPORT

- CONTACT YOUR LOCAL SPEC MIX® MANUFACTURER
- VISIT WWW.SPECMIX.COM
- CONTACT SPEC MIX®, INC.
PHONE: 888-SPEC MIX FAX: 651-454-5315